Metal Magnesium Market - Growth, Trends, Covid-19 Impact, and Forecasts (2023 - 2028)

Market Report | 2023-01-23 | 120 pages | Mordor Intelligence

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Report description:

The metal magnesium market is estimated at around 995 kilotons by the end of this year, and the market is projected to register a CAGR of over 5.5% during the forecast period.

The COVID-19 pandemic negatively impacted the market in 2020. However, the demand increased in 2021 due to the rise in consumption from various growing end-user sectors, such as automotive and electronics. Specifically, in automotive, metal magnesium is used in the manufacturing of car bodies, seat frames, steering wheels, transmission cases, and others. Moreover, in electronics, metal magnesium is used in heat dissipation systems, television and computer casings, and others.

Key Highlights
Over the short term, the growing demand for alloying with other metals and the increasing demand for lightweight materials in the aerospace and automotive industry are some driving factors stimulating the market demand.
On the flip side, fluctuation in the prices of metals is expected to hinder market growth.
The increasing adoption of electric vehicles is likely to create opportunities for the market in the coming years.
Asia-Pacific region is expected to dominate the market and is also likely to witness the highest CAGR during the forecast period.

Metal Magnesium Market Trends

Increasing Usage in the Production of Aluminum Alloys

Magnesium offers moderate and high strength characteristics to metals, especially aluminum alloy, without impacting the ductility. Aluminum alloys with magnesium added are placed into the 5000 series and are commercially available in plates and sheet forms.

The added proportion of magnesium in aluminum increases strength through solid solution strengthening and improves their strain-hardening ability. These alloys are the highest-strength non-heat-treatable aluminum alloys and, thus, are used extensively for structural applications.

High-strength aluminum alloys with added magnesium content are widely used in aerospace components' production because of their superior strength, durability, and lightweight characteristics.

The global automotive industry is currently witnessing switching trends as consumer inclination toward electric vehicles is changing the dynamics of the manufacturing process. As per OICA, global automotive production declined in 2020, accounting for over 77.62 million units from the previous year. The global automotive production in 2021 increased to 80.16 million units. However, the demand for the electric vehicle segment may likely ascend the demand for aluminum alloys. The growing demand for lightweight components across several applications is anticipated to ascend the market.

Aluminum alloys are installed in aircraft owing to their high strength and lightweight characteristics. An effective way to increase energy efficiency and reduce fuel consumption is by reducing aircraft mass, as a lower mass requires less lift force and thrust during flight.

The growing demand for commercial aircraft due to increasing air passengers and air transport for trade operations has triggered manufacturing. It covers high-strength and lightweight aircraft that can carry heavy loads at efficient performance.

For instance, in North America, according to the Boeing Commercial Outlook 2022-2041, the total deliveries of new airplanes accounted for 9,310 units by 2041 with a market service value of USD 1,045 billion. Moreover, in the United States, according to the Federal Aviation Administration (FAA), the number of aircraft in the country's commercial fleet accounted for 5,882 in 2020, witnessing a decline rate of 22.9% compared to the previous year. Moreover, the commercial fleet is forecast to increase to 8,756 in 2041, with an average annual growth rate of 2% per year.

Owing to all these factors, the market for metal magnesium is likely to grow globally during the forecast period.

Asia-Pacific Region to Dominate the Market

Asia-Pacific is the largest consumer of metal magnesium in the global market, with significant consumption from countries such as China, India, and Japan, among others.

Metal magnesium is mainly used in aluminum alloys, die-casting, iron and steel, metal reduction, and others. Moreover, aluminum alloys and die-casting have been increasingly used in manufacturing automotive parts, aerospace parts and equipment, and other such end-user industries. The Asia-Pacific region has a significant global automotive, aerospace, and electronics market share.

According to the International Organization of Motor Vehicle Manufacturers (OICA), China is the largest producer of automobiles. China 2021 manufactured nearly 2,60,82,220 vehicles accounting for about 32.5% of the global volume. The growing production of automobiles in the country is expected to drive the consumption of metal magnesium in aluminum alloy and die-casting, thereby benefiting the market's growth.

The demand for electric vehicles in China is anticipated to witness strong growth during the forecast period because of the rapid development due to rising government initiatives, an increasing number of manufacturing companies, and increasing charging infrastructure.

In the first half of 2022, over 2.4 million EVs were delivered to customers in mainland China equalling up to 26% of all car sales in the country during this period. Moreover, 57% of global EV sales were in Mainland China registering a 118% year-on-year growth rate.

The Chinese airline companies are planning to purchase about 7,690 new aircraft in the next 20 years, valued at approximately USD 1.2 trillion, which is further expected to raise the market demand for metal magnesium.

According to the OICA, 43,99,112 vehicles in India were produced in 2021, which increased by 30% compared to 33,94,446 units

manufactured in 2020. Moreover, the government's reforms, such as Aatma Nirbhar Bharat and Make in India programs, are expected to boost the automotive industry in the future. ?
Japan is transitioning to 100% electric car sales by 2035, and the Japanese electric vehicle market is growing. U.S. companies may find business opportunities in various areas related to electric vehicles. Expansion of the electric vehicle market in the country is therefore projected to benefit the market growth.
Therefore, all the factors mentioned above are likely to significantly impact the demand for the metal magnesium market in the Asia-Pacific region in the future.

Metal Magnesium Market Competitor Analysis

The metal magnesium market is partially consolidated in nature. Some of the key players in the studied market include Nanjing Yunhai Special Metal Co. Ltd, Taiyuan Tongxiang Magnesium Co. Ltd, Regal-metal, Wenxi YinGuang Magnesium Industry (Group) Co. Ltd, ICL GROUP, and US Magnesium LLC, among others (not in any particular order).

Additional Benefits:

The market estimate (ME) sheet in Excel format
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Table of Contents:

7 MARKET OPPORTUNITIES AND FUTURE TRENDS

7.1 Increasing Adoption of Electric Vehicles

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